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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,026

10/30/2003

Jeffrey A. Hall

279.401US1

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05/09/2007

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EXAMINER

TOY, ALEX B

ART UNIT

PAPER NUMBER

3739

MAIL DATE

DELIVERY MODE

05/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/698,026

Applicant(s)

HALL ET AL.

Examiner

Alex B. Toy

Art Unit

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

This Office Action is in response to applicant's Request for Continued Examination filed on April 30, 2007. The objection to claim 18 is withdrawn in view of applicant's amendment. All previous prior art rejections are maintained.

Claim Objections

Claim 21 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 17. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16, 17, and 19-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sherman (U.S. Pat. No. 6,059,778).

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Regarding claim 16, Sherman discloses a system for delivering RF energy to an endocardial tissue, the system comprising:

a catheter 30 having one or more electrodes 32, 36 proximate a distal end of the catheter, the catheter configured for being positioned such that the one or more electrodes are adjacent the endocardial tissue (Fig. 1), at least one of the electrodes including a tip electrode 36; and

a power control system 20 configured to provide power to the tip electrode (inherently capable of this intended use), the power having a plurality of alternating on portions and off portions, one set of adjacent on and off portions defining a duty cycle (col. 3, ln. 37-38 and col. 7, ln. 41-43, 63-67);

wherein the power control system delivers an energy pulse of between approximately 0.01 ms to 4 ms (col. 7, ln. 44-52) via the tip electrode 36, and the on portions and off portions of the duty cycle have a ratio of between 50% - 100% (col. 7, ln. 44-52).

The claim further calls for the tip electrode to have a thermal time constant of approximately 240 ms. Since the ring electrodes 32 of Sherman comprise platinum (col. 6, ln. 36-41), it would be obvious, if not inherent, to have the tip electrode 36 also comprise platinum. Sherman further discloses that the tip electrode has a diameter of 2.3 mm, which is equal to 0.091 inches (col. 6, ln. 52-53). Since the tip electrode of Sherman comprises platinum and practically has the exact same diameter (0.091 inches vs. 0.094 inches) as the platinum tip of applicant's device, it would be obvious, if

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not inherent, for the electrode tip of Sherman to have a thermal time constant of approximately 240 ms.

Furthermore, applicant has not disclosed any criticality or unexpected result associated with having a thermal time constant of approximately 240 ms, since applicant discloses that the claimed system applies to "almost any electrode for RF ablation" (specification pg. 8, ln. 10-11).

Regarding claims 17 and 21, Sherman discloses the system of claim 16, wherein the duty cycle chosen ranges from 80% to 100%. The device of Sherman is inherently capable of operating at a duty cycle of 80% to 100%. In addition, applicant has not disclosed any criticality or unexpected result associated with this limitation.

Regarding claim 19, Sherman discloses the system of claim 16, wherein the RF energy has a period of between 120 ms and 240 ms. The device of Sherman is inherently capable of operating as claimed. In addition, applicant has not disclosed any criticality or unexpected result associated with this limitation.

Regarding claim 20, Sherman discloses the system of claim 16, wherein the RF energy has a period of greater than 240 ms. The device of Sherman is inherently capable of operating as claimed. In addition, applicant has not disclosed any criticality or unexpected result associated with this limitation.

Regarding claim 22, Sherman discloses the system of claim 16, wherein one of the one or more electrodes includes a ring electrode 32 (Fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman ('778).

Regarding claim 18, Sherman discloses the system of claim 16. Sherman, however, does not expressly disclose that the platinum tip electrode includes an approximately 5 mm tip with a diameter of approximately 0.094 inches.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to make the platinum tip electrode of Sherman have an approximately 5 mm tip with a diameter of approximately 0.094 inches because applicant has not disclosed that making the platinum tip electrode to include an approximately 5 mm tip with a diameter of approximately 0.094 inches

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provides an advantage, is used in a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the approximate dimensions of Sherman or the claimed approximate dimensions because on page 8, lines 10-11 of the specification, applicant states that the present system applies to almost any electrode for RF ablation.

Claims 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman ('778) in view of Sherman (U.S. Pat. No. 5,971,980).

Regarding claim 16, see the previous rejection of claim 16. Sherman ('778) discloses a tip electrode 36 (col. 6, ln. 19-20 and Fig. 1) but does not expressly disclose that it delivers RF energy. Sherman ('980), however, discloses an analogous ablation probe comprising a ring electrode 26 and a tip electrode 22, which both deliver RF energy to tissue (col. 4, ln. 1-10 and Figs. 1 and 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have delivered RF energy from the tip electrode of Sherman ('788) in view of the teaching of Sherman ('980) as an obvious way of using a tip electrode that is well-known in the art.

Regarding claims 17-22, see the preceding rejections of claims 17-22.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

Regarding claim 16, applicant argues that the power control system of Sherman ('778) is not configured to provide power to the tip electrode 36 as claimed. In response

to this argument, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Sherman ('778) clearly discloses a tip electrode in conjunction with a power control system (Fig. 1). Electrodes, by definition, are inherently designed to deliver energy from a power source, which means the tip electrode 36 is inherently connected to the power control system 20 and capable of delivering power therefrom. All other limitations pertain to how the power is delivered, and the power control system of Sherman ('778) is capable of delivering power as claimed. Thus, since the power control system 20 is inherently connected to the tip electrode 36, the power control system of Sherman ('778) is capable of delivering power via the tip electrode as claimed. To reiterate, applicant has not claimed any structural features that define over the structure of Sherman ('778), and the device is capable of performing all the of the intended use limitations. Therefore, Sherman ('778) anticipates the claimed invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex B. Toy whose telephone number is (571) 272-1953. The examiner can normally be reached on Monday through Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AT *AT*
5/3/07

Michael Peffley
MICHAEL PEFFLEY
PRIMARY EXAMINER